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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,257	10/05/2005	Masahiro Yamamoto	92478-6300	1980

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EXAMINER	
SNYDER, ZACHARY J	
ART UNIT	PAPER NUMBER
2889	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,257	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Zachary Snyder	2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *11 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) *3* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/26/2006 and 10/05/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claim 2 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 11th, 2008.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-7, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. PG Publication 2001/000 3411 A1 to Honda et al.

In regard to claim 1, Honda discloses high-pressure discharge lamp comprising:

a bulb (lighting source bulb IB, paragraph 159) that includes a light emitting part having an electrode pair disposed and a discharge space formed therein (first electrode 2A and second electrode 2B, paragraph 159), and

a first sealing part and a second sealing part provided at different ends of the light emitting part (small-diameter portions 1b, paragraph 160); and

a proximity conductor (metal-coil CO2, paragraph 172) formed from a lead wire, a section of the lead wire being wound around an outer circumference of at least one of the first sealing part and a section of the light emitting part to form a wound portion (shown in figure 4), and

a remaining section of the lead wire forming a lead portion that extends from the wound portion across the light emitting part in proximity to or contacting with an outer surface of the light emitting part (junction conductor CC1, paragraph 170, is formed in proximity to the outer surface of the light emitting part), to a side of the discharge lamp on which the second sealing part is disposed (shown in figure 4), wherein

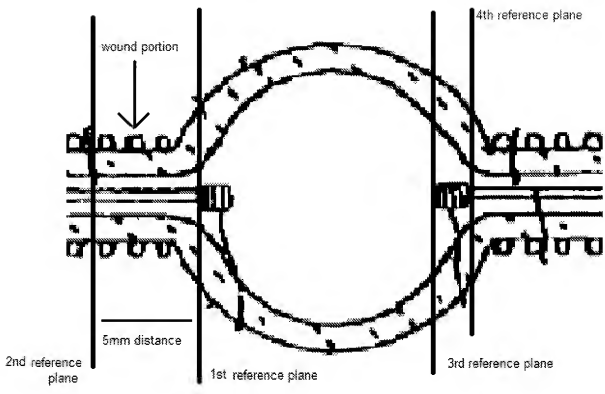
the lead portion is electrically connected to the electrode (junction conductor CC1 is connects the electrode pair and outer lead terminals, paragraph 55), of the pair, positioned nearer the second sealing part (shown in figure 4), and at least a section of the wound portion is wound substantially spirally at least 0.5 turns in a range from a 2nd reference plane to a 3rd reference plane (shown in figure below), and

a closed loop around one of the light emitting part and the first sealing part does not exist within the range (shown in figure below and figure 4 to see the loop is open), where

the 2nd to 3rd reference planes are parallel to a 1st reference plane lying orthogonal to a bulb longitudinal direction and including an end of the discharge space positioned at a base portion of the electrode nearer the first sealing part (shown in figure below),

the 2nd reference plane being distant 5 mm from the 1st reference plane (the length of the sealing part is 8mm, paragraph 181, so these reference planes can be chosen to be 5 mm apart)

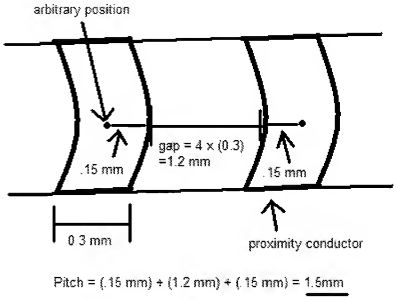
along the first sealing part and the 3rd reference plane passing through a tip of the electrode nearer the second sealing part (shown below).



In regard to claim 4, Honda discloses the limitations of claim 1 and that in a range defined by the 2nd and 3rd reference planes, a pitch interval of the substantially spirally wound portion of the proximity conductor is at least 1.5 mm.

Honda discloses that when the winding pitch of the coil is 500%, a gap four times wider than the diameter of the metallic wire shaping the coils is defined between two adjacent turns (paragraph 92). The diameter of the coil is 0.3 mm (paragraph 186). The figure below shows that the interval pitch as defined by the applicant ("distance in the longitudinal direction from an

arbitrary position on the proximity conductor to a position removed one revolution (360 degrees or 1 turn) from the arbitrary position") is at least 1.5 mm.



In regard to claim 5, Honda discloses the discharge lamp of claim 1 and that in the lighting method of the lamp, a discharge of the high-pressure discharge lamp is initiated after applying a high-frequency voltage to the electrode pair (the lighting circuit for any embodiment of the invention lights the high-intensity discharge lamp at a high frequency region, paragraph 111).

In regard to claim 6, Honda discloses the lighting method of claim 5 and that a frequency of the high-frequency voltage is in a range of 1 kHz to 1 MHz (the operating frequency of the lighting circuit is defined in the range of 5 to 200 kHz, paragraph 121).

In regard to claim 7, Honda discloses the lighting method of claim 5 and that the amplitude of the high frequency voltage is at least 400 V (starting voltage is 1.0 kVp-p, paragraph 194).

In regard to claim 12, Honda discloses the high-pressure discharge lamp of claim 1 and a lamp incorporating the high-pressure discharge lamp within a concave reflective mirror (figure 9 shows the lamp encased with reflector 14, paragraph 258).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. PG Publication 2001/000 3411 A1 to Honda et al. as applied to claim 1 above, and further in view of JP 58198327 to Danno et al.

In regard to claim 3, Honda discloses the high-pressure discharge lamp of claim 1 but does specifically disclose that a shortest distance from the lead portion to the inner surface of the light emitting part is 10 mm or less in a range defined by the 1st reference plane and a 4th

reference plane parallel to the 1st reference plane and including an end of the discharge space positioned at a base portion of the electrode nearer the second sealing part.

Danno discloses a metallic vapor discharge lamp wherein a proximity conductor is formed in contact with the bulb (less than 10 mm) along its length (within any range defined by reference planes).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the lead portion within a 10 mm range of the inner surface of the light emitting part because by having contact between the proximity conductor and the luminous bulb the mounting work of the proximity conductor is facilitated and start voltage is accurately reduced and, in turn, the unevenness of the start voltage between lamps can also be reduced, as taught by Danno.

Claims 8-11, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. PG Publication 2001/000 3411 A1 to Honda et al. as applied to claim 1 above.

In regard to claim 8, Honda discloses the high-pressure discharge lamp of claim 1 but does not specifically disclose that there is a voltage applying unit operable to apply a high-frequency voltage to the electrode pair.

Honda discloses that a high-frequency voltage is being applied to the electrode pair (discussed in claim 5) but not that there is a voltage applying unit.

However it would have been obvious to one of ordinary skill in the art at the time the invention was made that a voltage applying unit could be used to supply the voltage to the lamp because Honda only discloses that a high-frequency voltage is supplied and does not limit what is supplying it. One of ordinary skill in the art would see that a voltage applying unit that supplies high-frequency voltage would be suitable in Honda's invention because it is an obvious variation of the voltage applying circuit taught by Honda.

In regard to claim 9, Honda teaches the lighting method of claim 8 and that the frequency of the high-frequency voltage is in a range of 1 kHz to 1 MHz (the operating frequency of the lighting circuit is defined in the range of 5 to 200 kHz, paragraph 121).

In regard to claim 10, Honda teaches the lighting method of claim 8 and that the amplitude of the high frequency voltage is at least 400 V (starting voltage is 1.0 kVp-p, paragraph 194).

In regard to claim 11, Honda discloses the high-pressure discharge lamp of claim 1 teaches the lighting device of claim 8. It would be obvious to one of ordinary skill in the art at the time the invention was made that the lighting device of claim 8 could be used to supply the voltage for the lamp of claim 1.

In regard to claim 13, Honda discloses the high-pressure discharge lamp of claim 1 and teaches the high-pressure discharge lamp device of claim 11 and an image display device using them (used in an image projection device, paragraph 135).

In regard to claim 14, Honda discloses the high-pressure discharge lamp of claim 1 and teaches the high-pressure discharge lamp device of claim 11 and a headlight device using the high-pressure discharge lamp (used in a mobile head light, paragraph 135).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary Snyder whose telephone number is (571)270-5291. The examiner can normally be reached on Monday through Thursday, 7:30AM to 6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Toan Ton can be reached on (571)272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zachary Snyder/
Examiner, Art Unit 2889

/Toan Ton/
Supervisory Patent Examiner
Art Unit 2889